## CS 3005: Programming in C++

## **Spring 2024 Schedule**

Day	Topic	Work Due
Jan 8	Week 1	
Jan 12		<u>Hello</u>
W01	Compiled Languages (Compilers, Linkers, Makefiles)	
W01	Source Control (git basics)	
W01	Computer Systems (Input/Output)	
W01	Computer Systems (CPU, Memory)	
W01	Statically/Strongly Typed Variables	
W01	Functions	
Jan 16	Week 2	
Jan 16	Martin Luther King Jr. Day (no classes)	
Jan 19		Questions 3
W02	Control Structures	
W02	Classes (Data members, Methods)	
W02	Linear data sequences	
W02	Colors, Pixels, Images, Portable Pixmap (PPM)	
W02	Files	
Jan 22	Week 3	
Jan 24	week 5	ASCII Imaga
W03	I/O operators, overloading	ASCII Image
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Jan 29	Week 4	<u>Image File</u>
Jan 31	Practice Examination 1	Practice Exam 1
Feb 2	Examination 1	Exam 1
W04	Drawing shapes with pixels	
W04	Conditional statements	
W04	Loops	
W04	Debugging	
Feb 5	Week 5	
Feb 7		Action Data and Menu Data
W05	Image Filters	
W05	Memory model: Stack, Heap, Static,	
W05	Memory Checking	
W05	Variable Scope	
W05	Pointers, References, Arrays, Indexing	
Feb 12	Week 6	
Feb 12		PPM Menu
Feb 16		
W06	Image Operations	PPM Operators
W06	Operator Overloading	
W06	Makefiles	
W06	Function Pointers	
Feb 19	Week 7	
Feb 19	President's Day (no classes)	
Feb 23		Image Filters
W07	Recursion	
W07	Debugging Better	
W07	Random Numbers	
W07	The NumberGrid	

Feb 26	Week 8	
Feb 26	Practice Examination 2	Practice Exam 2
Feb 28	Examination 2	Exam 2
W08	Inheritance	LAUIII 2
W08	Polymorphism	
W08	Virtual Table	
W08	Grid points in a plane	
Mar 4	Week 9	
Mar 4	week 9	Number Grid
Mar 8		Color Table
W09	Julia Sets	Color Table
Mar 11-15	Spring Break (no classes)	
Mar 18	Week 10	
Mar 20		Complex Fractal
W10	The Mandelbrot Set	
W10	Templates	
W10	Standard Template Containers	
W10	Standard Template Algorithms	
W10	Color Tables	
Mar 25	Week 11	
Mar 25		<u>Julia Set</u>
Mar 29		Mandelbrot Set
W11	Threads of Execution	
Apr 1	Week 12	
Apr 1	Practice Examination 3	Practice Exam 3
Apr 3	Examination 3	Exam 3
W12	Debugging Even Better	
Apr 8	Week 13	
Apr 8		Threaded Grid
Apr 12		GUI 1
W13	Command Line Arguments	
W13	Source Control Branches	
Apr 15	Week 14	
Apr 19		GUI 2
W14	Exceptions	
W14	Preprocessor	
W14	Makefiles	
Apr 22	Week 15	
Apr 22	Practice Examination 4	Practice Exam 4
Apr 24	Examination 4	Exam 4
Apr 25	Last Day of Classes	
Apr 29-May 2	Final Exams	
Apr 29	Final Exam 9:00 am - 10:50 am	Final Exam
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Class announcements may modify schedule from that listed above.